

IN THE SPECIFICATION

Please replace the current title with the following:

-- A METHOD AND APPARATUS FOR MODULATING AND
DEMODULATING DATA INTO A VARIABLE LENGTH CODE AND A PROVIDING
MEDIUM FOR IMPLEMENTING THE METHOD--

Please amend the paragraph beginning on page 1, line 5 as follows:

AI
--The present invention is directed to a ~~modulation~~ a data-modulating apparatus, a data-modulating method, a data-demodulating apparatus, a data-demodulating method, and a data-providing medium. Particularly, the invention relates to an apparatus and method for modulating data to transmit the data or record the data on a recording medium, an apparatus and method for demodulating data that has been modulated, and a medium for use in transmitting or recording data that has been modulated.--

Please amend the paragraph beginning on page 1, line 12 as follows:

AG
cont
--~~Data is modulated to be~~ Modulated data is transmitted via a predetermined transmission path or recorded on a recording medium such as, for example, a magnetic disk, an optical disk or a magneto-optical disk. ~~Known as one of~~ One such data-modulating ~~methods~~ method is block encoding. In the block encoding, a row of data is divided into blocks, or units each consisting of $m \times i$ bits. (hereinafter, the units of data will be referred to as "data words.") The data words are modulated to code words, each consisting of $n \times i$ bits, in accordance with an appropriate coding rule. Each code word has a fixed length if i is one (1). It has a variable length if the value of i can be selected from a plurality of values ranging from 1 to i_{max} (the

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concl
greatest value for i) is selected for i. The code generated by the block encoding is a variable-length code (d, k; m, n; r).--

Please amend the paragraph beginning on page 2, line 6 as follows:

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--To record variable-length codes generated as described above, on a compact disk, a mini-disk or the like, NRZI (NonReturn to Zero Inverted) modulation may be performed on the variable-length codes. In the NRZI modulation, the variable-length code is inverted at each one (1) and not inverted at each zero (0). The variable-length codes subjected to the NRZI modulation (hereinafter referred to as "level codes " are recorded on the disk.--

Please amend the last paragraph on page 5 as follows:

A4
-- To record data on a recording medium or transmit data in a specific way, the data is modulated into codes that can be recorded on the medium or transmitted in that specific way. The modulated codes may contain a direct-current component. If so, various error signals, such as the tracking error signal for the servo control in a disk drive are likely to change or contain jitter. Therefore, the modulated codes should not ~~better~~ contain a direct-current component.--

Please amend the paragraph beginning on page 15, line 16 as follows:

A5
-- The data-demodulating apparatus according to the invention comprises a sync signal detecting means (e.g., SYNC/Sync ID identification section 33 of FIG. 3) that is designed to detect a sync signal from the train of codes after detecting the minimum run. This sync signal has a pattern that breaks the maximum run.--

Please amend the abstract on page 41 as follows:

Ab -- A method and apparatus for modulating data modulates data having a length of m-bits to a variable length code having a basic code length of n-bits. A SYNC but insertion section ~~14~~ adds a sync signal to a train of codes, after ~~adding~~ a minimum run, ~~said~~. The sync signal ~~having~~ has a pattern that breaks a maximum run. It is ~~thereby possible to provide a~~ reliable sync signal pattern.